

DOCKET NO.: 4235/PCT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE MATTER OF THE **NEW PCT NATIONAL PHASE PATENT APPLICATION**

OF: Takuya SUNAGAWA et al.		USPS EXPRESS MAIL
USSN: TO BE ASSIGNED		EL 897 676 527 US
FILED: August 31, 2001		AUGUST 31 2001

FOR: Nonaqueous Electrolyte Secondary Battery

INTERNATIONAL SERIAL NO.: PCT/JP00/00731

INTERNATIONAL FILING DATE: 09. FEBRUARY 2000 (09.02.00)

COMMISSIONER FOR PATENTS
BOX PCT
WASHINGTON, D. C. 20231

August 31, 2001

SECOND PRELIMINARY AMENDMENT

Dear Sir:

After calculating the filing fee, but before the first examination, please amend the above identified application as follows.

Referring to the Literal Translation of International Application
PCT/JP00/00731

In the Claims:

Please cancel claims **1, 2, 11 and 12**.

Claims **3 to 10**, and **13 to 24** have previously been cancelled in applicants' First Preliminary Amendment.

Please enter new claims **25 to 47** as follows.

- 1 **25.** (new) A nonaqueous electrolyte secondary battery
- 2 characterized as using a mixture of a first oxide and a

3 second oxide for its positive electrode material, said
4 first oxide being a spinel oxide consisting substantially
5 of lithium, manganese, a metal other than manganese, and
6 oxygen, and said second oxide being represented by the
7 compositional formula $\text{Li}_a\text{M}_2\text{b}\text{Ni}_c\text{Co}_d\text{O}_2$ (where M_2 is at least
8 one element selected from the group consisting of Al, Mn,
9 Mg and Ti, $0 < a < 1.3$, $0.02 \leq b \leq 0.3$, $0.02 \leq d/(c + d) \leq$
10 0.9 and $b + c + d = 1$).

1 **26.** (new) The nonaqueous electrolyte secondary battery as
2 recited in claim 25, characterized in that said first oxide
3 is an oxide derived via substitution of other element for
4 a part of manganese in a lithium-manganese complex oxide.

1 **27.** (new) The nonaqueous electrolyte secondary battery as
2 recited in claim 25, characterized in that said first oxide
3 is a lithium-manganese complex oxide represented by the
4 compositional formula $\text{Li}_x\text{Mn}_{2-y}\text{M}_1y\text{O}_{4+z}$ (where M_1 is at least one
5 element selected from the group consisting of Al, Co, Ni,
6 Mg and Fe, $0 \leq x \leq 1.2$, $0 < y \leq 0.1$ and $-0.2 \leq z \leq 0.2$).

1 **28.** (new) The nonaqueous electrolyte secondary battery as
2 recited in claim 27, characterized in that M_1 in the first
3 oxide's compositional formula $\text{Li}_x\text{Mn}_{2-y}\text{M}_1y\text{O}_{4+z}$ is at least one
4 of Al and Mg.

1 **29.** (new) The nonaqueous electrolyte secondary battery as
2 recited in claim 25, characterized in that M₂ in the second
3 oxide's compositional formula Li_aM₂_bNi_cCo_dO₂ is Mn.

1 **30.** (new) The nonaqueous electrolyte secondary battery as
2 recited in claim 29, characterized in that $0.1 \leq d/(c + d)$
3 ≤ 0.5 is satisfied in the second oxide's compositional
4 formula Li_aM₂_bNi_cCo_dO₂.

1 **31.** (new) The nonaqueous electrolyte secondary battery as
2 recited in claim 25, characterized in that said first and
3 second oxides are mixed in the ratio by weight of 20:80 -
4 80:20.

1 **32.** (new) The nonaqueous electrolyte secondary battery as
2 recited in claim 25, characterized in that said first oxide
3 has a mean particle diameter of 5 - 30 μm .

1 **33.** (new) The nonaqueous electrolyte secondary battery as
2 recited in claim 25, characterized in that said second
3 oxide has a mean particle diameter of 3 - 15 μm .

1 **34.** (new) A nonaqueous electrolyte secondary battery
2 characterized as using a mixture of a first oxide, a second
3 oxide and a third oxide for its positive electrode
4 material, said first oxide being a spinel oxide consisting
5 substantially of lithium, manganese, a metal other than
6 manganese, and oxygen, said second oxide being different